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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/398,019	09/17/1999	JEFFREY KROON	HRF-B-224	9564

7590 12/28/2004

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EXAMINER

PERSINO, RAYMOND B

ART UNIT	PAPER NUMBER
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2682

DATE MAILED: 12/28/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/398,019	Applicant(s) KROON ET AL.	
	Examiner Raymond B. Persino	Art Unit 2682	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 02 July 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) 1-9, 22-25 and 32-39 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-21, 26-30 and 40 is/are allowed.
- 6) ☒ Claim(s) 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by YAMADA (US 4,707,828 A).

Regarding claim 31, YAMADA discloses a method of communicating in a communication system that includes a plurality of nodes that transmit messages over a radio channel, including a source node having a message to deliver to a destination node the improvement comprising the step of broadcasting from the source node over the radio channel a request for access to the radio channel to the destination node prior to broadcasting the message (column 2 line 40 to column 4 line 12).

3. Claim 31 is rejected under 35 U.S.C. 102(b) as being anticipated by CHILDRESS et al (US 5,574,788 A).

Regarding claim 31, CHILDRESS et al discloses a method of communicating in a communication system that includes a plurality of nodes that transmit messages over a radio channel, including a source node having a message to deliver to a destination node the improvement comprising the step of broadcasting from the source node over

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the radio channel a request for access to the radio channel to the destination node prior to broadcasting the message (column 3 lines 49-65).

Allowable Subject Matter

4. Claims 10-21, 26-30 and 40 are allowed.

Regarding claim 10, the applicant includes the subject matter of a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting and receiving data packets from another one of the nodes over one of the radio channels, the control channel being available for transmission of control packets from any of the plurality of nodes, a method of controlling access to the control channel in order to minimize collisions between control packets comprising the steps of: (a) receiving a control packet transmitted over the control channel at one of the plurality of nodes requiring access to the control channel; and (b) inhibiting transmission over the control channel from the node requiring access for a predetermined amount of time after the receipt of a control packet sufficient to allow the node addressed by the control packet to transmit a responsive control packet, thereby minimizing collisions between control packets on the control channel. The closest prior art, CHILDRESS et al (US 5,574,788 A), discloses a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting and receiving data packets from another one of the nodes over one of the radio channels, the control channel being available for transmission of

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control packets from any of the plurality of nodes, comprising the steps of: (a) receiving a control packet transmitted over the control channel at one of the plurality of nodes requiring access to the control channel. However, CHILDRESS et al does not disclose and (b) inhibiting transmission over the control channel from the node requiring access for a predetermined amount of time after the receipt of a control packet sufficient to allow the node addressed by the control packet to transmit a responsive control packet, thereby minimizing collisions between control packets on the control channel.

Moreover, no other prior art has been discovered that would anticipate or render obvious, the claim. Therefore, the applicant's invention of claim 10, when considering the entirety of the subject matter disclosed in the claim, comprises a unique combination of subject matter that is neither taught nor suggested by the prior art.

Regarding claim 16, the applicant includes the subject matter of a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting or receiving packets from another one of the nodes over one of the radio channels, the control channel being available for transmissions of requesting and responsive control packets from any of the plurality of nodes, a method of controlling access to the control channel in order to minimize collisions between control packets comprising the steps of: (a) dividing the control channel into a series of time frames; (b) dividing each of the time frames into a plurality of time slots; (c) assigning each of the time slots to one of the plurality of nodes; and (d) transmitting requesting control packets only in the time slot assigned to the transmitting node. The closest prior art, CHILDRESS et al (US

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5,574,788 A), discloses a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting or receiving packets from another one of the nodes over one of the radio channels, the control channel being available for transmissions of requesting and responsive control packets from any of the plurality of nodes: comprising (a) dividing the control channel into a series of time frames; (b) dividing each of the time frames into a plurality of time slots. However, CHILDRESS et al does not disclose (c) assigning each of the time slots to one of the plurality of nodes; and (d) transmitting requesting control packets only in the time slot assigned to the transmitting node. Moreover, no other prior art has been discovered that would anticipate or render obvious, the claim. Therefore, the applicant's invention of claim 16, when considering the entirety of the subject matter disclosed in the claim, comprises a unique combination of subject matter that is neither taught nor suggested by the prior art.

Regarding claim 19, the applicant includes the subject matter of a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting or receiving packets of data from another one of the nodes over one of the radio channels, the control channel being available for transmissions of requesting and responsive control packets from any of the plurality of nodes, a method of controlling access to the control channel in order to minimize collisions between control packets comprising steps of: (a) dividing the control channels into a series of time slots; (b) providing a plurality of

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mini-slots at the beginning of each time slot; (c) assigning each of the mini-slots in each time slot to one of the plurality of nodes; (d) transmitting requesting control packets during the mini-slot assigned to the transmitting node. The closest prior art, CHILDRESS et al (US 5,574,788 A), discloses a communication system that includes a plurality of nodes, a plurality of radio channels including a control channel and a plurality of data channels, each of the nodes capable of transmitting or receiving packets of data from another one of the nodes over one of the radio channels, the control channel being available for transmissions of requesting and responsive control packets from any of the plurality of nodes; comprising: a) dividing the control channels into a series of time slots. However, CHILDRESS et al does not disclose (b) providing a plurality of mini-slots at the beginning of each time slot; (c) assigning each of the mini-slots in each time slot to one of the plurality of nodes; (d) transmitting requesting control packets during the mini-slot assigned to the transmitting node. Moreover, no other prior art has been discovered that would anticipate or render obvious, the claim. Therefore, the applicant's invention of claim 19, when considering the entirety of the subject matter disclosed in the claim, comprises a unique combination of subject matter that is neither taught nor suggested by the prior art.

Regarding claim 21, the applicant includes the subject matter of a communication system comprising: a plurality of nodes, each of said nodes including a means for transmitting and a means for receiving data packets; a plurality of radio channels, one of said radio channels designated a control channel said control channel being available for transmissions of control packets from any of the plurality of nodes, said nodes

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monitoring the control packets for information regarding the availability of said radio channels; and means for controlling access to the control channel in order to minimize collisions between control packets, said means for controlling access permitting a node to transmit a control packet over the control channel following a predetermined amount of time after the receipt of a control packet transmitted over the control channel, the predetermined amount of time sufficient to allow the node intended to receive the control packet to transmit a responsive control packet. The closest prior art, CHILDRESS et al (US 5,574,788 A), discloses a communication system comprising: a plurality of nodes, each of said nodes including a means for transmitting and a means for receiving data packets; a plurality of radio channels, one of said radio channels designated a control channel said control channel being available for transmissions of control packets from any of the plurality of nodes, said nodes monitoring the control packets for information regarding the availability of said radio channels. However, CHILDRESS et al does not disclose means for controlling access to the control channel in order to minimize collisions between control packets, said means for controlling access permitting a node to transmit a control packet over the control channel following a predetermined amount of time after the receipt of a control packet transmitted over the control channel, the predetermined amount of time sufficient to allow the node intended to receive the control packet to transmit a responsive control packet. Moreover, no other prior art has been discovered that would anticipate or render obvious, the claim. Therefore, the applicant's invention of claim 21, when considering the entirety of the

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subject matter disclosed in the claim, comprises a unique combination of subject matter that is neither taught nor suggested by the prior art.

Regarding claim 26, the applicant includes the subject matter of a method of controlling access to a radio channel in a communication system that includes a plurality of nodes communicating over the radio channel comprising the steps of: receiving at one of the plurality of nodes requiring access to the radio channel a control packet indicating the completion of data exchange over the channel; transmitting a control packet requesting access to the radio channel in order to communicate with another node from the node requiring access following a predetermined amount of time after the receipt of the control packet indicating the completion of data exchange, the predetermined amount of time being sufficient to allow the node intended to receive the control packet to transmit a responsive control packet. The closest prior art, CHILDRESS et al (US 5,574,788 A), discloses a method of controlling access to a radio channel in a communication system that includes a plurality of nodes communicating over the radio channel comprising the steps of: receiving at one of the plurality of nodes requiring access to the radio channel a control packet indicating the completion of data exchange over the channel. However, CHILDRESS et al does not disclose transmitting a control packet requesting access to the radio channel in order to communicate with another node from the node requiring access following a predetermined amount of time after the receipt of the control packet indicating the completion of data exchange, the predetermined amount of time being sufficient to allow the node intended to receive the control packet to transmit a responsive control packet. Moreover, no other prior art has

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been discovered that would anticipate or render obvious, the claim. Therefore, the applicant's invention of claim 26, when considering the entirety of the subject matter disclosed in the claim, comprises a unique combination of subject matter that is neither taught nor suggested by the prior art.

Regarding claim 29, the applicant includes the subject matter of a method of controlling access to a radio channel in a communication system that includes a plurality of nodes communicating over the radio channel, the radio channel being available for transmissions of messages from any of the plurality of nodes, the method comprising the steps of: (a) dividing the radio channel into a series of time slots; (b) providing a plurality of mini-slots at the beginning of each time slot; (c) assigning each of the mini-slots in each time slot to one of the plurality of nodes; and (d) transmitting a request for access to the radio channel, from a node having a message to deliver to another one of the plurality of nodes, only during the mini-slot assigned to the transmitting node, prior to delivering the message. The closest prior art, CHILDRESS et al (US 5,574,788 A), discloses a method of controlling access to a radio channel in a communication system that includes a plurality of nodes communicating over the radio channel, the radio channel being available for transmissions of messages from any of the plurality of nodes, the method comprising the steps of: (a) dividing the radio channel into a series of time slots; (b) providing a plurality of mini-slots at the beginning of each time slot. However, CHILDRESS et al does not disclose (c) assigning each of the mini-slots in each time slot to one of the plurality of nodes; and (d) transmitting a request for access to the radio channel, from a node having a message to deliver to another one of the

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plurality of nodes, only during the mini-slot assigned to the transmitting node, prior to delivering the message. Moreover, no other prior art has been discovered that would anticipate or render obvious, the claim. Therefore, the applicant's invention of claim 26, when considering the entirety of the subject matter disclosed in the claim, comprises a unique combination of subject matter that is neither taught nor suggested by the prior art.

Election/Restrictions

5. Applicant's election with traverse of Group II in the reply filed on 7/2/2004 is acknowledged. The traversal is on the ground(s) that in addition of claim 40, which contains subject matter similar to that of claim 1 (which is in group I), in group II necessitates a search of that subject matter and therefore it would not be a burdensome to search group I. This is not found persuasive because while the subject matter of the generic claim of group I would have to be considered, the dependent subject matter does not. As such, it would be a burden on the examiner to search all of the subject matter of group I. The requirement is still deemed proper and is therefore made FINAL.

Conclusion

6. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

ENG (US 6,370,153 B1)

HORLANDER (US 6,044,085 A)

ALPEROVICH et al (US 5,896,376 A)

CHILDRESS et al (US 5,864,762 A)

CHAN (US 5,790,551 A)

OKSANEN et al (US 5,918,170 A)

TALARMO et al (US 5,778,318 A)

CORNES et al (US 6,222,849 B1)

SCOLES et al (US 4,907,224 A)

7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Raymond B. Persino whose telephone number is (703) 308-7528. The examiner can normally be reached on Monday-Thursday from 8:00 AM to 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vivian C. Chin can be reached on (703) 308-6739. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Raymond B. Persino



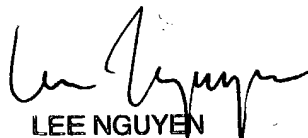
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RP


LEE NGUYEN
PRIMARY EXAMINER